

RECEIVED

Page 1 of 7

AUG 08 2000

TECH CENTER 1600/2000

1643

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000
TIME: 13:30:24

Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

3 <110> APPLICANT: The Government of the United States of America as
5 <120> TITLE OF INVENTION: Novel Human Cancer Antigen NY ESO-1/CAG-3 and Gene
6 Encoding Same
8 <130> FILE REFERENCE: 20264269PC
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/529,206
C--> 11 <141> CURRENT FILING DATE: 2000-06-13
13 <150> PRIOR APPLICATION NUMBER: US60/061,428
14 <151> PRIOR FILING DATE: 1997-10-08
16 <160> NUMBER OF SEQ ID NOS: 106
18 <170> SOFTWARE: PatentIn Ver. 2.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 805
22 <212> TYPE: DNA
23 <213> ORGANISM: Homo sapiens
25 <400> SEQUENCE: 1
26 agcagggggc gctgtgtgtt ccgagaatac gagaataacct cgtggccctt gacccctctt 60
27 ctgagagccg ggccagggtt ccggagccat gcaggccgaa ggccggggca cagggggttc 120
28 gacggggcat gctgtatggcc caggaggccc ttgcattctt gatggccca gggggcaatgc 180
29 ttgcggccca ggagaggccg gtggcacggg ccggcagggtt cccggggggc caggggcagc 240
30 aaggggctcg gggccgggag gaggggccccc gcgggggtccg catggccggcg cggccctcagg 300
31 gctgtatggg tgctgcagat gcggggccag gggggccggag agccgccttc ttgagttctta 360
32 ccttcgcatttgcgcgac caccatggaa agcagagctg gccggcaggaa gcctggccca 420
33 ggatggccca ccgcctcccg tgccagggtt gcttctgaag gagttcactg tgccggccaa 480
34 catactgact atccgactgt ctgtgcaga ccacccggca ctgcagctt ccatcagctc 540
35 ctgtctcccg cagcttcccg ttgtgtatgtt gatcaecgcag tgctttctgc cctgtttttt 600
36 ggctcgcctt ccttcaggcgc agggccgcata agcccgccctt ggcccccctt ccttagtcat 660
37 gcctcctccc cttaggaaatgt gtcccgac gatggcccaat ttcatgtgg gggcctgatt 720
38 ttgtgtcggtt ggaggaggcc ggcttacatgt ttgtttctgt tagaaaataaa aactgagctt 780
39 cggaaaaaaa aaaaaaaaaaaa aaaaaa 805
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 540
43 <212> TYPE: DNA
44 <213> ORGANISM: Homo sapiens
46 <400> SEQUENCE: 2
47 atgcaggccg aaggccgggg cacaggggtt tcgacggccg atgctgtatgg cccaggaggc 60
48 cctggcatcc ctgtatggcc agggggcaat gctggccggcc caggagaggc ggggtccacg 120
49 ggcggccagag gtcccccgggg cgcaggccgtt gcaaggggccctt cggggccgggg aggaggccccc 180
50 cccgggggttc cgcattggcc cgcggcttca gggctgtatg gatgtgcag atgcggggcc 240
51 agggggccgg agagccgcctt gcttgcgtt tacctcgccca tgcccttcgc gacacccatgc 300
52 gaagcagagc tggcccgccg gaggccggcc caggatggcc caccgcgttcc cgtggccagg 360
53 gtgcatttcga aggaggccatgt tggccggcc aacatactgtt gatccgact gactgctgca 420
54 gaccacccgc aactgcagctt ctcacatgcg tccgtctcc agcagcttcc cctgtttatgt 480
55 tggatcacgc agtgcgttccgtt gcccgttccgtt ctcacatgcg gcaaggccgc 540
57 <210> SEQ ID NO: 3
58 <211> LENGTH: 174
59 <212> TYPE: DNA
60 <213> ORGANISM: Homo sapiens

ENTERED

RECEIVED

Page 2 of 7

08 2000

TECH CENTER 1600/2000

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000
TIME: 13:30:24

Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

62 <400> SEQUENCE: 3
63 atgcgtatgg cccaggaggc cctggcattc ctgatggccc agggggcaat gctggcgccc 60
64 caggagaggc ggggtccacg ggcggcagag gtcccccgggg cgcaggggca gcaaggggct 120
65 cggggccggg aggaggcgcc cgcgggggtc cgcattggcg gcggttca gggc 174
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 180
69 <212> TYPE: PRT
70 <213> ORGANISM: Homo sapiens
72 <400> SEQUENCE: 4
73 Met Gln Ala Glu Gly Arg Gly Thr Gly Ser Thr Gly Asp Ala Asp
74 1 5 10 15
76 Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
77 20 25 30
79 Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Pro Gly Pro Arg Gly Ala
80 35 40 45
82 Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Ala Pro Arg Gly Pro
83 50 55 60
85 His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
86 65 70 75 80
88 Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
89 85 90 95
91 Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
92 100 105 110
94 Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
95 115 120 125
97 Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His Arg Gln
98 130 135 140
100 Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln Gln Leu Ser Leu Leu Met
101 145 150 155 160
103 Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser
104 165 170 175
106 Gly Gln Arg Arg
107 180
110 <210> SEQ ID NO: 5
111 <211> LENGTH: 58
112 <212> TYPE: PRT
113 <213> ORGANISM: Homo sapiens
115 <400> SEQUENCE: 5
116 Met Leu Met Ala Gln Glu Ala Leu Ala Phe Leu Met Ala Gln Gly Ala
117 1 5 10 15
119 Met Leu Ala Ala Gln Glu Arg Arg Val Pro Arg Ala Ala Glu Val Pro
120 20 25 30
122 Gly Ala Gln Gly Gln Gln Gly Pro Arg Gly Arg Glu Glu Ala Pro Arg
123 35 40 45
125 Gly Val Arg Met Ala Ala Arg Leu Gln Gly
126 50 55
129 <210> SEQ ID NO: 6
130 <211> LENGTH: 9
131 <212> TYPE: PRT

RECEIVED

Page 3 of 7

08 2000

TECH CENTER 1600/2900

DATE: 07/28/2000
TIME: 13:30:24

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,206
Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

132 <213> ORGANISM: Homo sapiens
134 <400> SEQUENCE: 6
135 Ala Gln Pro Pro Ser Gly Gln Arg Arg
136 1 5
139 <210> SEQ ID NO: 7
140 <211> LENGTH: 9
141 <212> TYPE: PRT
142 <213> ORGANISM: Homo sapiens
144 <400> SEQUENCE: 7
145 Thr Pro Met Glu Ala Glu Leu Ala Arg
146 1 5
149 <210> SEQ ID NO: 8
150 <211> LENGTH: 9
151 <212> TYPE: PRT
152 <213> ORGANISM: Homo sapiens
154 <400> SEQUENCE: 8
155 Pro Met Glu Ala Glu Leu Ala Arg Arg
156 1 5
159 <210> SEQ ID NO: 9
160 <211> LENGTH: 9
161 <212> TYPE: PRT
162 <213> ORGANISM: Homo sapiens
164 <400> SEQUENCE: 9
165 Gly Ala Thr Gly Gly Arg Gly Pro Arg
166 1 5
169 <210> SEQ ID NO: 10
170 <211> LENGTH: 9
171 <212> TYPE: PRT
172 <213> ORGANISM: Homo sapiens
174 <400> SEQUENCE: 10
175 Gly Pro Arg Gly Ala Gly Ala Ala Arg
176 1 5
179 <210> SEQ ID NO: 11
180 <211> LENGTH: 9
181 <212> TYPE: PRT
182 <213> ORGANISM: Homo sapiens
184 <400> SEQUENCE: 11
185 Leu Ala Gln Pro Pro Ser Gly Gln Arg
186 1 5
189 <210> SEQ ID NO: 12
190 <211> LENGTH: 9
191 <212> TYPE: PRT
192 <213> ORGANISM: Homo sapiens
194 <400> SEQUENCE: 12
195 Val Ser Gly Asn Ile Leu Thr Ile Arg
196 1 5
199 <210> SEQ ID NO: 13
200 <211> LENGTH: 9
201 <212> TYPE: PRT

RECEIVED

Page 4 of 7

AUG 08 2000

TECH CENTER 1600/2900

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000
TIME: 13:30:24

Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

202 <213> ORGANISM: Homo sapiens
204 <400> SEQUENCE: 13
205 Ile Arg Leu Thr Ala Ala Asp His Arg
206 1 5
209 <210> SEQ ID NO: 14
210 <211> LENGTH: 9
211 <212> TYPE: PRT
212 <213> ORGANISM: Homo sapiens
214 <400> SEQUENCE: 14
215 Ser Gly Pro Gly Gly Ala Pro Arg
216 1 5
219 <210> SEQ ID NO: 15
220 <211> LENGTH: 10
221 <212> TYPE: PRT
222 <213> ORGANISM: Homo sapiens
224 <400> SEQUENCE: 15
225 Thr Val Ser Gly Asn Ile Leu Thr Ile Arg
226 1 5 10
229 <210> SEQ ID NO: 16
230 <211> LENGTH: 10
231 <212> TYPE: PRT
232 <213> ORGANISM: Homo sapiens
234 <400> SEQUENCE: 16
235 Thr Ile Arg Leu Thr Ala Ala Asp His Arg
236 1 5 10
239 <210> SEQ ID NO: 17
240 <211> LENGTH: 10
241 <212> TYPE: PRT
242 <213> ORGANISM: Homo sapiens
244 <400> SEQUENCE: 17
245 Ala Thr Pro Met Glu Ala Glu Leu Ala Arg
246 1 5 10
249 <210> SEQ ID NO: 18
250 <211> LENGTH: 10
251 <212> TYPE: PRT
252 <213> ORGANISM: Homo sapiens
254 <400> SEQUENCE: 18
255 Phe Leu Ala Gln Pro Pro Ser Gly Gln Arg
256 1 5 10
259 <210> SEQ ID NO: 19
260 <211> LENGTH: 10
261 <212> TYPE: PRT
262 <213> ORGANISM: Homo sapiens
264 <400> SEQUENCE: 19
265 Thr Pro Met Glu Ala Glu Leu Ala Arg Arg
266 1 5 10
269 <210> SEQ ID NO: 20
270 <211> LENGTH: 10
271 <212> TYPE: PRT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000
TIME: 13:30:24

Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

```

272 <213> ORGANISM: Homo sapiens
274 <400> SEQUENCE: 20
275 Arg Cys Gly Ala Arg Gly Pro Glu Ser Arg
276 1 5 10
279 <210> SEQ ID NO: 21
280 <211> LENGTH: 10
281 <212> TYPE: PRT
282 <213> ORGANISM: Homo sapiens
284 <400> SEQUENCE: 21
285 Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg
286 1 5 10
289 <210> SEQ ID NO: 22
290 <211> LENGTH: 10
291 <212> TYPE: PRT
292 <213> ORGANISM: Homo sapiens
294 <400> SEQUENCE: 22
295 Leu Ala Gln Pro Pro Ser Gly Gln Arg Arg
296 1 5 10
299 <210> SEQ ID NO: 23
300 <211> LENGTH: 10
301 <212> TYPE: PRT
302 <213> ORGANISM: Homo sapiens
304 <400> SEQUENCE: 23
305 Arg Gly Pro Arg Gly Ala Gly Ala Ala Arg
306 1 5 10
309 <210> SEQ ID NO: 24
310 <211> LENGTH: 10
311 <212> TYPE: PRT
312 <213> ORGANISM: Homo sapiens
314 <400> SEQUENCE: 24
315 Leu Asn Gly Cys Cys Arg Cys Gly Ala Arg
316 1 5 10
319 <210> SEQ ID NO: 25
320 <211> LENGTH: 10
321 <212> TYPE: PRT
322 <213> ORGANISM: Homo sapiens
324 <400> SEQUENCE: 25
325 Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg
326 1 5 10
329 <210> SEQ ID NO: 26
330 <211> LENGTH: 15
331 <212> TYPE: PRT
332 <213> ORGANISM: Homo sapiens
334 <400> SEQUENCE: 26
335 Ala Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Ala Pro Arg
336 1 5 10 15
339 <210> SEQ ID NO: 27
340 <211> LENGTH: 14
341 <212> TYPE: PRT

```



Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY DATE: 07/28/2000
PATENT APPLICATION: US/09/529,206 TIME: 13:30:25

Input Set : A:\20264261.app
Output Set: N:\CRF3\07282000\I529206.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:620 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:54
L:620 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:54
L:620 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:54